STONEX

S9III PLUS

GNSS RECEIVER FOR PROFESSIONAL SURVEYORS

EVOLUTION IN PROGRESS

S9 III Plus GNSS is the result of the continuous evolution of the STONEX GPS integrated receivers. Featuring a new, high accuracy multi constellation antenna, a powerful UHF transmitter and the GSM 3G WCDMA modem, for a fully integrated communications choice, combined with a light and modern design, STONEX S9 III Plus improves the field performances, giving immediate and reliable positioning even in difficult environments. Compatible with GPS, GLONASS, GALILEO, COMPASS, no limitation will slow down your field operations.

A SCALABLE SOLUTION: NO; THANK YOU!

Fully complete are not just words: no options are available for STONEX S9 III Plus GNSS, that combines an embedded 220 channels GNSS board, accurate and fast in satellite fixing, UHF radiomodem, GSM 3G modem for GPS network connections, Bluetooth™ device for completely cable-free operations. S9 III Plus GNSS can work as Base, transmitting to one or more Rovers, and as GPS network Rover: the complete set of communications options give you a completely free operating choice from the beginning, no after sale options are requested.

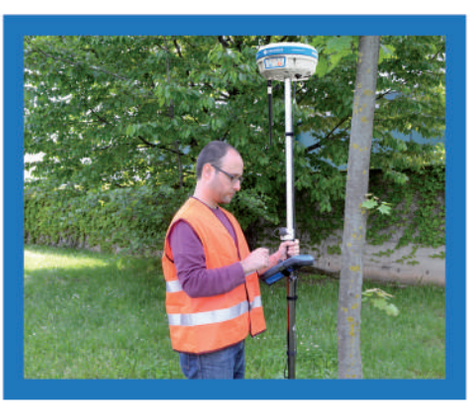
TOTAL FLEXIBILITY AT YOUR SERVICE

The integrated UHF transmitting and receiving radiomodem, with output power up to 2W, makes STONEX S9 III PLUS GNSS a powerful source of GPS corrections: constructions sites, cadastral and land survey, marine and hydrographic applications, take a big advantage using one high accuracy transmitting GPS, combined with Rovers. Moreover, S9III Plus is compatible with several GPSs: Satel™ and TRIMTALK™ 450S are just some examples of the supported protocols. And where a GPS Network is available, S9 III Plus GNSS is the perfect rover, using the 3G integrated modem.

RELIABLE, FAST, CABLE FREE

The IP67 certification, combined with a high shock resistance - S9 III Plus GNSS survives even after a 2 m drop on concrete - guarantee the maximum strength and the best water/dust-tight. With its short initialization time, S9 III Plus GNSS lets you save time everyday, every job; And when the GPS signal is lost, the advanced STONEX technology used in the new S9 III Plus GNSS reduces to a moment the re-initialization time, while positioning accuracy, checked from the field software, gives you a totally comfortable feeling of a good result.

The Bluetooth™ device, make S9 III Plus a fast and completely cable free one man system for every kind of topographic job.



TECHNICAL FEATURES S9 III PLUS

STONEX

RECEIVER

Channels	220
Satellite Tracked	GPS: Simultaneous L1 C/A, L2E, L2C,L5
	GLONASS: Simultaneous L1 C/A, L1P, L2 C/A (GLONASS M Only), L2P
	SBAS: Simultaneous L1 C/A, L5
	GALILEO (reserved): Simultaneous L1 BOC, E5A, E5B, E5AltBOC1
	COMPASS: B1 (QPSK), B1- MBOC (6,1, 1/11), B1-2 (QPSK), B2 (QPSK), B2-BOC (10,5), B3 (QPSK),B3BOC (15,2,5), L5 (QPSK)
Position Rate	Up to 20 Hz
Signal Reacquisition	< 1 sec
RTK Signal Initialization	typically < 10 s
Hot Start	typically < 15 s
Initialization Reliability	> 99.9 %
Internal Memory	256 MB
Micro SD Card	4 GB Internal Memory (Over 60 days of raw static data storage with recording sample every 1 second)

POSITIONING[1]

HIGH PRECISION STATIC SURVEYING (Long time observations)	
Horizontal	2.5 mm + 0.3 ppm RMS
Vertical	5 mm + 0.5 ppm RMS
CODE DIFFERENTIAL POSITIONING	
Horizontal	0.25 m + 1 ppm RMS
Vertical	0.45 m + 1 ppm RMS
SBAS POSITIONING (Typical)	
Horizontal	0.5 m RMS
Vertical	0.85 m RMS
REAL TIME KINEMATIC (< 25Km) – NETWORK SURVEYING[3]	
Fixed RTK Horizontal	10 mm + 1 ppm RMS
Fixed RTK Vertical	20 mm + 1 ppm RMS

COMMUNICATION

Connectors I/O	7-pins Lemo and 5-pins Lemo interfaces. Multicable with USB interface for connecting with PC
Bluetooth Device	2,4 GHz class II: maximum range is 50 m
Reference Outputs	CMR, CMR+, sCMRx, RTCM 2.3, RTCM 3.0, RTCM 3.1
Navigation Outputs	ASCII (NMEA-0183) GSV, AVR, RMC, HDT, VGK, VHD, ROT, GGK, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GRS, GBS

INTEGRATED GNSS ANTENNA

High accuracy four constellation microstrip antenna, zero-phase center, with internal multipath suppressive board

Specifications subject to change without notice

INTERNAL RADIO

Frequency Range	403 - 473 MHz
Channel Spacing	12.5KHz / 25 KHz
Emitting Power	0.5 /1/2 W
Maximum Range	3-4 Km (urban environment), 5-6 Km with optimal conditions[4]
Protocol	Transparent EOT/EOC/FST, SATEL, South, Stonex Type 1, TRIMTALK II/IIe, TRIMMARK 3, TRIMTALK 450S

WIRELESS MODULE

Band	GSM/GPRS/EDGE : 850/900/1800/1900 MHz WCDMA/HSDPA : 2100/1900/850 MHz
Output Power	GSM850, EGSM900 : 33 dBm(2W) GSM1800, PCS1900 : 30 dBm(1W) WCDMA : 23 dBm

POWER SUPPLY

Battery	2500 mAh high capacity Lithium battery, Voltage 7.2 V
Voltage	9 to 15 V DC external power input with over-voltage protection
Working Time in Static Mode (GPS+GLONASS)	7 hours
Working time in GSM RTK with Cable Connection (GPS+GLONASS)	6.5 hours
Working time in wireless network RTK with Bluetooth connection (GPS+GLONASS)	around 4 hours
Charge time	typically 7 hours
Power consumption	< 3.8 W
Remaining time battery light blinking	1 hour

PHYSICAL SPECIFICATION

Weight	1.2 Kg with internal battery, radio standard UHF antenna
Operating Temperature	-30°C to 60°C (-22°F to 140°F) (internal radio TX 50°C)
Storage Temperature	-40°C to 80°C (-40°F to 176°F)
Waterproof/Dustproof	IP67. Protected from temporary immersion to depth of 1 meter and from 100% humidity
Shock Resistance	Designed to survive a 2 m pole drop on concrete
Vibration	Vibration resistance
Winter Grade Option	Operating at -40°C (-40°F)

1. Accuracy and reliability are generally subject to satellite geometry (DOPs), multipath, atmospheric conditions and obstructions. In static mode they are subject even to occupation times: the longer is the Baseline, the longer must be the occupation time.
2. Depends on SBAS system performance.
3. Network RTK precisions depends on the network performances and are referenced to the closest physical base station.
4. Varies with the operating environment and with electromagnetic pollution.

IP67 Bluetooth CE RoHS 2 2011/65/EU

STONEX AUTHORIZED DEALER

STONEX® Srl
Via Cimabue 39 - 20851 Lissone (MB) Italy
Phone +39 039 2783008 Fax +39 039 2789576
www.stonexpositioning.com
info@stonexpositioning.com

UNI EN ISO 9001:2008 OCTOBER 2014 REV-01